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NOVEMBER • 1952

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

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- Cinerama — What It Is And How It Works
- Set Lighting For Best TV Film Results
- Beating The Variable Frame-line Bugaboo

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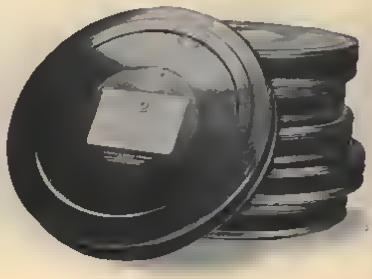

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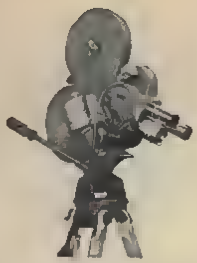

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PUBLICATION OF AMERICAN SOCIETY OF CINEMATOGRAPHERS

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ARTICLES

AMATEUR CINEMATOGRAPHY

FEATURES

ON THE COVER

THE PHOTOGRAPHIC CREW that shoots the weekly Burns and Allen television film, as seen by the players on the set Director of Photography is Philip Tannura, ASC, (in checkered shirt, foreground), who photographs the show with two Mitchell 35mm cameras mounted on "crab" dollies. To his right is producer director Ralph Levy Using overhead lighting, thus freeing stage floor of cables, Tannura smooths out shadows in lower areas of sets through use of twin photospot lamps which serve as fill lights, shown here clamped to base of both camera dollies.—*Photo by Bud Graybill.*

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HERBERT BARRETT (r) succeeds Peter Mole, ASC, as president of SMPTE. Barrett is Gen. Precision Equip. Co. v.p., Mole heads Mole-Richardson Co.

TOM TUTWILER, ASC, one of the industry's ace aerial cinematographers, while shooting air scenes for a sequence in a film for the "Terry and the Pirates" TV series, barely escaped what might have been a serious mid-air crash last month.

Shooting from a camera plane piloted by Paul Mantz, second plane which was being photographed suddenly swooped downward and beneath the camera plane, reportedly sideswiping the latter. Both planes limped back to their respective airfields despite moderate damage. Although seriously shaken up, none of the planes' occupants was injured.

•

COL. NATHAN LEVINSON, head of Warner Brothers' sound department, who died last month at the age of 64, was a member of the editorial board of the American Cinematographer magazine. With the advent of radio, he became internationally famous for his work in the field of sound. Later, with the development of the first sound films, Col. Levinson contributed several articles on the subject which were published in American Cinematographer.

•

OCTOBER SIXTH marked the 25th anniversary of the first "talking" picture produced in Hollywood. "The Jazz Singer," starring Al Jolson, and produced by Warner Brothers.

Two ASC members figured importantly in this production: Hal Mohr, who directed the photography, and Warren Lynch, who shot stills on the production.

Both men are still active cinematographers—Mohr, having recently completed the photography of "Member of the Wedding" at Columbia, and Lynch the photography of "Retreat Hell!" released by Warner Brothers.

•

JOHN R. BISHOP, who recently succeed-

(Continued on Page 468)

JOHN ARNOLD, Hollywood Republican Comm. veepee, distributes "Ike" stickers to prospective ASC supporters of candidate during interval in recent ASC meet in Hollywood. Accepting stisker is Fred Jackman, while solid supporter John Boyle (standing) and Frank Zucker look on. In background is partial view of ASC's "Wall Of Fame," dedicated to Academy Award Winners.

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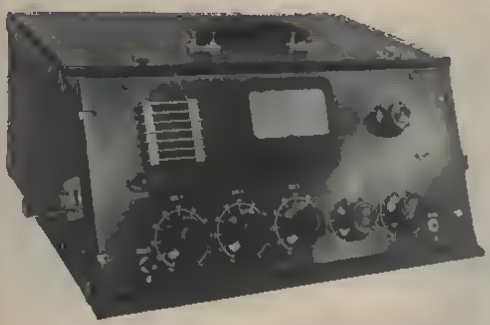

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BULLETIN BOARD

(Continued from Page 466)

ed Ray Wilkinson as head of the camera department at Paramount Studios, has been elected to Associate membership in the American Society of Cinematographers. Prior to Wilkinson's resignation, Bishop had been Wilkinson's assistant for many years.

•

EO OLSEN, cinematographer for Dudley Pictures Corpn., has returned to Hollywood after completing a five-month's tour of the U. S., filming sports events for Dudley's series of theatrical and television films. Olsen uses a Cine Special camera, shoots 16mm Commercial Kodachrome, which is subsequently "blown up" to 35mm in the Trucolor.

•

JOSEPH RUTTENBERG, ASC, last month completed the photography of MGM's "Julius Caesar" in Technicolor, said to be the only color production on record shot almost entirely by aid of overhead illumination alone.

•

ACCORDING TO one Hollywood film laboratory head, magnetic sound—now in general use for recording in all major Hollywood studios—has put a dent in film lab business to the extent of 30%.

•

BENJAMIN BERG, ASC, Eclair camera representative in Hollywood, is readying an article for American Cinematographer describing the unique built in exposure meter which is a feature of the new Eclair cameras.

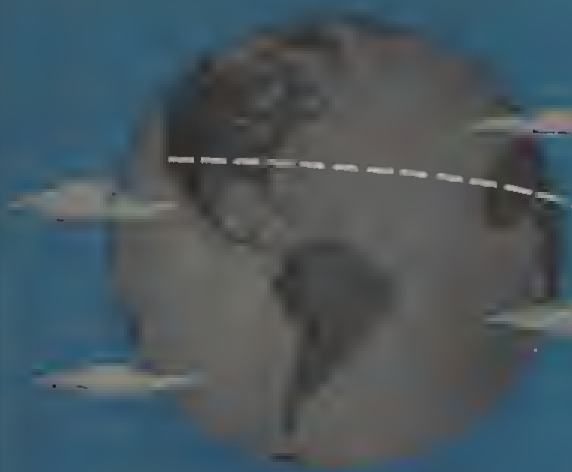
•

OCTOBER 27TH meeting of American Society of Cinematographers featured an illustrated talk on color in photography by Ralph M. Evans, author of "An Introduction To Color." Mr. Evans is head of the Color Control Department at Eastman Kodak Company, Rochester, New York.

Among the other honored guests who attended the meeting were Toshio Uchukata and N. Takamura, of the Japanese motion picture industry in Tokyo, Mr. Harry Mimura, Japanese cinematographer. British cinematographer Lionel Wheeler, of London, and Frank Zucker, ASC, head of Camera Equipment Co.

•

AMONG ASC MEMBERS who attended the 72nd semi-annual convention of the SMPTE in Washington, D.C. last month were Peter Mole, who stepped down from the SMPTE presidency, handing the gavel to his successor, Herbert Barnett, John Boyle, Sidney Solow, Karl Freund, and Charles Handley.



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Cinematography REVIEWS

Of Pictures Previewed in Hollywood Last Month

IT GROWS ON TREES — *Photographed in black and-white by Maury Gertsman, ASC, for Universal-International Pictures. Produced by Leonard Goldstein and directed by Arthur Lubin*

Troubles start for Polly Baxter (Irene Dunn) when she discovers two trees in her backyard growing $5 and $10 bills. Her husband (Dean Jagger) refuses to let her use the money, even though the middle class family is harried by budget difficulties. From thereon to the final fadeout it's a hilarious picture made pictorially interesting by Maury Gertsman's skillful execution of crane and dolly shot technique. The crane maneuvers in the opening sequence are exceptionally commendable—an excellent study for students of cinematography.

Thereafter, similar camera treatment is smooth and precise and is easily the standout photographic highlight of the picture. Commendable, too is Gertsman's polished lighting of the interiors, which make up about 50% of the picture.

The daytime exteriors are marked by that smooth lighting which Gertsman has come to achieve in his pictures through skillful use of scrims and diffusers, and that "just right" balance of fill light that invariably gives his scenes a genuine natural aspect.

•

STOP, YOU'RE KILLING ME! — *Photographed in Warner-Color by Ted McCord, ASC, for Warner Brothers. Produced by Louis F. Edelman and directed by Roy Del Ruth.*

This is Ted McCord's first Warner Color assignment, and it proves that McCord can get as much out of this new color system as any other Warner Brothers cinematographer who has used it to date. On the other hand, it may also prove that Warner Brothers has perfected Warner-Color to where it is now as simple to use as black-and-white film—which has been their aim.

Story is laid at time of demise of prohibition and has to do with Broderick Crawford, a racketeer of that era and his wife, Claire Trevor, and their experiences encountered in going "legit," as Crawford puts it.

Most of the scenes are staged indoors, even many of the "exteriors" and this gave McCord the advantage of control led lighting—which is advantageous to any color production.

Also evident is fact Warners still are having a little trouble with their make-up for men for this color system, but no doubt the solution is just a matter of time, judging from the way they have overcome other obstacles.

All in all it's another interesting study of Warner-Color, a process which the industry has been watching with keen interest.

•

APRIL IN PARIS — *Photographed in Technicolor by Wilfred M. Cline, ASC, for Warner Brothers. Produced by William Jacobs and directed by David Butler.*

Because most Technicolor musicals generally follow the same pat formula for photography, Wilfred Cline's work in this production will be viewed with considerable interest for the reason that his technique, particularly his Technicolor lighting, produces a markedly different result. Noticeable is the way he tones down lighting of the upper regions of sets and often on the players themselves. Then there is the interesting treatment of the shots of the chorus on stage. Normally, the lighting would come predominantly from direction of the footlights—often with unsatisfactory results. Cline has ignored the rule that says you *must* light it "such and such a way" and quite obviously has struck out along bold new paths, with interesting pictorial results.

Story's about singer Doris Day who gets invitation to European jaunt in error, and who is ultimately straightened out by government hireling Ray Bolger.

•

THE MAGIC BOX — *Photographed in Technicolor by Jack Cardiff, ASC, for J. Arthur Rank. Produced and directed by Ronald Neam.*

Jack Cardiff, or perhaps it was the art director evidently decided on a pattern of soft, pastel coloring for the photography of this picture. At any rate it has been achieved with some sacrifice of quality in the photography, which is spotty — being marked by washed out faces in many scenes. This of course, could also be due to the processing by Technicolor's London laboratory, which doesn't always seem to achieve the same crisp quality and color fidelity as does Technicolor's labs in this country.

Otherwise, the techniques of camera handling and composition contribute substantially to keeping alive a somewhat loose story about William Friese-

(Continued on Page 506)

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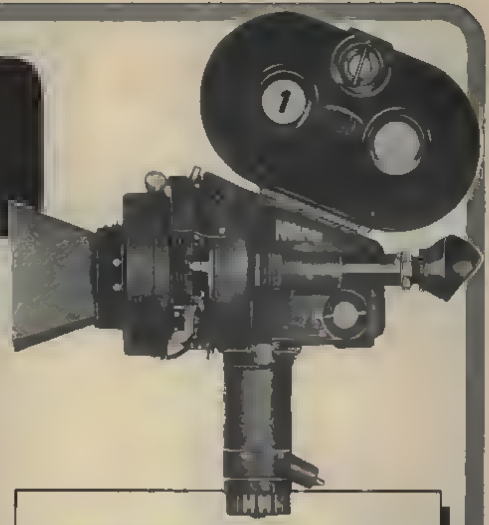

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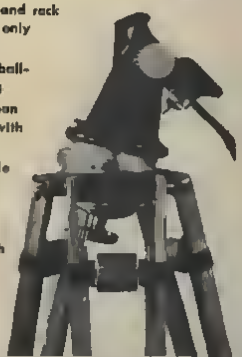

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CLOSEUPS

Notes and editorial comment by the editor . . . .

Just to remind readers that American Cinematographer celebrates its 32nd anniversary with this issue, AC undergoes a change in cover format this month. Dominant is the internationally recognized symbol of the screen which henceforth will frame the cover illustration each month.

Thirty-two years—384 consecutive issues with never a miss—is a proud record in this field, one unequaled by any other industry publication. This record would not have been possible without the cooperation and enthusiastic support of AC's many advertisers and thousands of subscribers. The avid devotion of both is borne out by the record of many advertisers who have appeared regularly in the magazine since its inception, and of the many readers who long have been devoted subscribers.

Today, American Cinematographer is read the world over wherever motion pictures are made. Each issue not only goes into the homes and offices of hundreds of directors of photography, camera department heads, film producers, film laboratories, etc., in Hollywood, but reaches the cameramen, producers and processors of motion pictures in the vast television, industrial film and 16mm film fields—not to mention its wide following among the world's advanced amateur movie makers.

As the recognized international "Magazine of Motion Picture Photography," it has, more than any other industry medium, welded motion picture makers in all parts of the world into one common fraternity, which monthly looks to American Cinematographer for authentic news of latest technical developments in the production of 35mm and 16mm motion pictures.

★

One of the more flagrant violations of screen credit ethics, which seems never to receive serious challenge, is the studios' repeated practice of slighting directors of photography who contribute a substantial share of the photography of a feature production as 2nd unit men or location and background plate photographers.

We see another instance of this with the release of 20th Century-Fox's "Snows of Kilimanjaro." Here is one of the standout color productions of the year in which the photography is superb from start to finish. Leon Shamroy, ASC, receives the sole screen credit for directing the photography; yet we feel that the contribution which Charles G. Clarke, ASC, made to this picture in the way of foreign location shots of Africa, Paris and the Riviera is too important and extensive to go uncredited. Without this footage, there certainly could not have been a production — nothing to which to tie Shamroy's exquisite studio photography. Both men have turned in superlative color compositions—Clarke the foreign location exteriors, Shamroy the beautiful portraiture of the principal players and the supporting continuity shots.

Despite the studio's oversight in not crediting Clarke for his photography, it is notable that it saw fit to give dual credits for other technical contributions to the picture, namely that of art direction, set decoration and sound. In addition, there is a credit for the special photographic effects of Ray Kellogg.

Already, some in the industry who have a voice in the annual awards voting have stated they could not honestly nominate the picture for a photographic award in view of its present incomplete credit for camera work; they also point out that the existing situation could very well prove a deterrent to the nomination of the picture for photographic achievement.

It is hoped that the matter will receive the attention of the Academy in due time and that the committee on nominations will endeavor to have the producers of "Snows" amend the photographic credit well in advance of nominations time.

★

An interesting folder came in the mail recently from Princeton Film Center, Incorporated, Princeton, New Jersey, describing a number of 16 millimeter color and sound films available rental-free to groups. It is interesting for two reasons: 1) the films are ideal material for cine club programs, and 2), the titles suggest filming ideas for amateurs in search of good movie making material, viz: "Canaries Are Fun," about raising canaries in the home, "On The Track," showing the vital role of our railroads; "Whistle In The Night," about romance of the railroads. Eight other subjects listed are equally inspiring for the imaginative amateur movie maker. A screening of the films undoubtedly will give cine amateurs more concrete filming suggestions.

—A.E.G.

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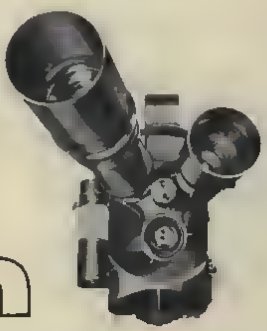

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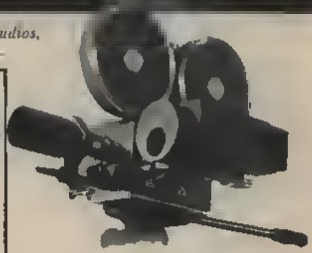

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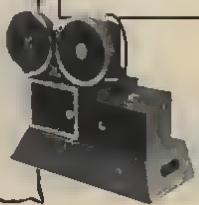

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VISITORS as well as ASC members were interested listeners during demonstration and discussion of the Vistascope process, conducted by Dr Charles R Daily, ASC, of Paramount Studios

CHARLES G CLARKE, president of American Society of Cinematographers, welcomes technical men from India's motion picture industry to ASC's November meeting. From l to r are Minoo Katrak, B P Divecha, Clarke, M R Archarekar, D Subramanyam, and B N. Sircar.

INDIA cinematographer B P Divecha (left foreground) and sound technician Minoo Katrak listen to Ernest Laszlo, ASC, discuss fine points of the Mitchell 35mm studio camera, which was demonstrated in conjunction with unique "crab" dolly designed by Steve Krilanovich (far left)

India Film Technicians Feted By Cinematographers

Technical talks and equipment demonstrations augment dinner given by American Society of Cinematographers for visiting technicians of India's motion picture industry.

By ALVIN D ROE

SIDNEY SOLOW, ASC, (left) demonstrated new automatic film splicer to visitors. Watching demonstration (r to l) are D Subramanyam, Minoo Kstrak, Fred Jackman, Jr., ASC, and Peverell Marley, ASC

THE AMERICAN SOCIETY OF CINEMATOGRAPHERS whose eminent members photograph most of the theatre and television motion pictures made in Hollywood, were hosts to the technical contingent of the 14-member delegation of distinguished artists, producers and technicians from the motion picture industry of India during their visit to Hollywood last month.

Named by the India motion picture industry to represent the film business of their country for a 4-week tour of the United States were five technical men, in addition to four of the country's most beautiful and talented women stars and three leading male stars. The five men hosted by the ASC were: B. P. Divecha, chief cameraman for the Kardar Studios in Bombay; D Subramanyam, of Madras, producer, director and recently president of the South Indian Film Chamber of Commerce, M R Archarekar, motion picture art director from Bombay; Minoo Katrak, Bombay, sound recording engineer; and B. N. Sircar, Indian motion picture producer and exhibitor.

Following a dinner at the Society's clubhouse in Hollywood, ASC president Charles G. Clarke formally introduced the honored Indian guests, each of whom addressed the gathering briefly. For the technicians, it was the culmination of a long anticipated opportunity to meet in person the many cameramen and cinematographic technicians whom they had come to know through American Cinematographer magazine.

Each of the visitors told something of his experiences in making motion

(Continued on Page 503)

THE STEEL BANK VAULT from which Joseph Cotten steals a million dollars prior to fleeing to Brazil Colortrans, Juniors and Photofloods operating on house current, furnished the illumination used by Ernest Laszlo in photographing this dramatic scene

Documentary photography lends realism and dramatic punch to

THE STEEL TRAP

. . . filmed almost entirely in actual locales.

By ARTHUR ROWAN

BESIDES BEING ONE OF the season's better motion pictures, "The Steel Trap" also is noted for the fact almost 98 percent of it was filmed away from the studio, in actual locales It is embellished with slick documentary treatment in the photography by cinematographer Ernest Laszlo, ASC. a quality which enhances the story appreciably, imparting as it does the illusion one is actually witnessing the happenings surrounding the absconding by a trusted bank executive of a million dollars—the crux of the story

Ernest Laszlo, ASC

Joseph Cotten is the executive who suddenly is tempted to steal the bank's funds and flee with his wife and child to the safety of extradition-proof Brazil Encountering everything short of actual apprehension in his two-day week-end flight attempt, he changes his mind when his wife discovers his plot, and manages to return the money to the bank just moments before opening time the following Monday morning.

This Thor Production, under the guidance of producer Bert Friedlob and given the skillful direction of Andrew Stone. utilizes such actual locales as city streets, interior of banks and office buildings, an airport and hotel rooms. Only one studio set was used—that of the hotel bedroom where Cotten's wife, Theresa Wright, discovers he's a thief and leaves him. Shooting this sequence required but one day, and represents the only studio filming in the entire picture

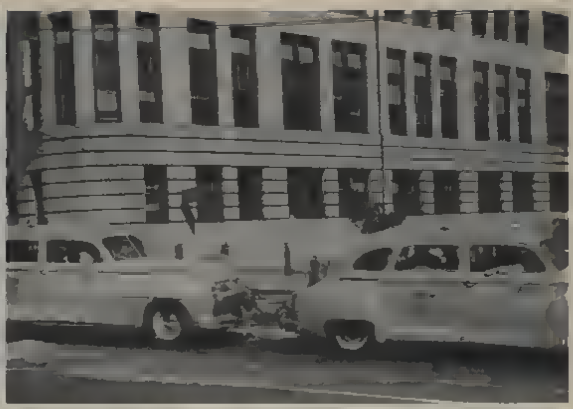
The actual locations used were in Los Angeles, and in New Orleans where Cotten and Miss Wright try vainly to make plane connections for Brazil The Los Angeles locations included several downtown city streets; marriage license bureau in the City Hall; interior of the International Airport; TWA's downtown office; Alexandria Hotel; Markham Building, a barber shop; interior of a TWA plane, and a dwelling in San Fernando Valley In New Orleans, the airport, TWA office. Antoinne's famous restaurant, and several city streets served for locations

Photographing a picture in such off the lot sets as enumerated here might be considered an easier chore than shooting in the studio. Actually, it is not The risk for the cameraman is greater because, unlike in the studio where lighting can be controlled and there is unlimited assistance in the way of helpers, equipment, etc., he faces in locales outside the studio a multitude of unlooked for factors such as changing sunlight on exteriors, inadequate lighting equipment for his interiors, lack of camera movement which wild walls ordinarily provide in the studio, and the need to balance interior lighting with daylight coming through windows and doors Actually, it would seem that shooting under such conditions would require more equipment and a greater crew than when shooting in the studio on the sound stage But in this instance, Ernest Laszlo worked with perhaps the smallest crew ever to photograph a feature production on location Transportation of equipment and crew to the various location sites was either by a single truck (in Los Angeles) or by plane, as when traveling to New Orleans Thus, limited space and the shortage of accommodations for camera, lighting and grip equipment made it necessary for Laszlo to operate with a crew consisting of only two grips, three electricians, plus regular camera crew

The lighting equipment consisted of Colortrans, Juniors and Baby Juniors. Space and personnel limitations also ruled out the use of a generator Power for the lights, camera and sound equipment was invariably supplied by domestic power lines; and when this wasn't feasible, as when shooting the taxi interiors, interior of plane, and several exteriors, power was supplied by a number of storage batteries sufficient to provide 110-volt current.

(Continued on Page 496)

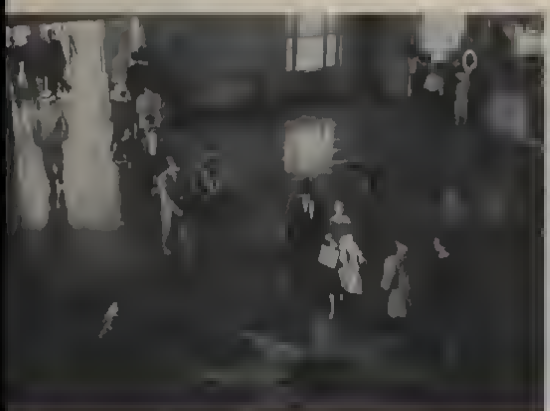
THE CONVENIENCE of "wild walls" was sorely missed on more than one occasion by Lazslo and his camera crew when shooting interiors such as this in TWA's ticket office in downtown Los Angeles



TWO TAXIS were tied together to enable shooting the running taxi shots in "The Steel Trap." Players, camera and cameramen are in the second taxi, storage batteries and sound recording equipment in the first

IN SHOOTING interiors in the TWA plane, Lazslo employed Cotortrans and a Juniar for key light and got exceptional results. For day shots, tinted plexiglass covered the windows to permit balancing the light

DESPITE CAVERNOUS interior of the bank, Lazslo accomplished excellent photographic results with limited lighting equipment and use of the banks' houselighting power lines. Most shots, of course, were at close range



JUST ONE of many interiors that required use of tinted plexiglass on windows and doors to permit balancing the interior illumination with the daylight coming through the openings—the TWA office in New Orleans

LARGE WINDOWS in some of the interiors did not deter cinematographer Lazslo in aiming for realistic shots such as this at couple in Western Union office in New Orleans. Filtering the window light made the shot possible

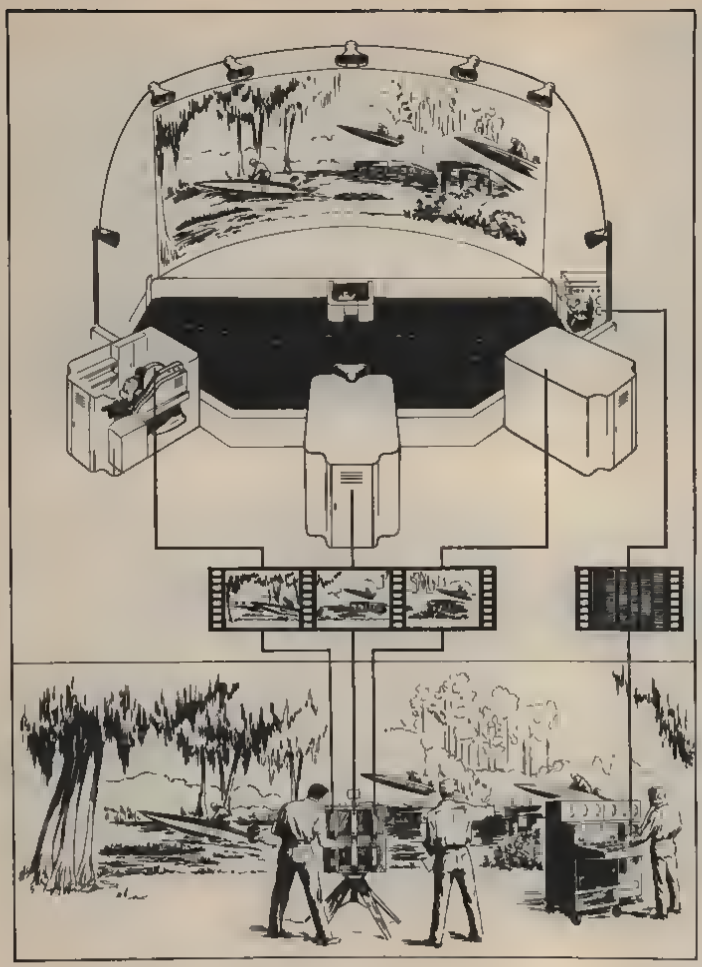


DIAGRAM shows course of a Cinerama film production from camera to projection At bottom, scene is photographed with three-lensed camera, which records scene on three separate 35mm films In projection, films are screened by three projectors—one in center and one at each side The three film images become one on the large horizontal curved screen, and give the illusion of multi-dimensional reality without recourse to Polaroid spectacles Stereophonic sound is recorded magnetically through five or more mikes, which produce a multiple sound track This is reproduced through a like number of speakers which surround the screen

And Now... CINERAMA

Just as sound changed the course of motion pictures 25 years ago, Cinerama promises to broaden the scope of feature films. What it is and how it works is described here by one who witnessed its New York premiere.

By JOHN W BOYLE, ASC

THE LONG HERALDED Cinerama made good at its first public presentation last month at the Broadway Theatre in New York City. The successful premiere showing marked another of those periodical innovations which have punctuated the history of the motion picture industry over the years, and like the others before it is destined to have a major effect on its future.

As was everyone else in the motion picture industry who attended the premiere of Cinerama, I was tremendously impressed with its possibilities. Cinerama is not a stereo film system nor does its inventor call it a three-dimension system It is, instead, a means of bringing vastness to the screen without distortion or loss of definition and to create a sense of space through a larger, new type of screen, which fills the proscenium arch of the theatre Sir Alexander Korda has described it most aptly as ". . . one of the most important inventions in the history of films It gives the complete illusion of three dimension effects in color and sound without the use of glasses."

Lowell Thomas, one of the important men associated with the new process describes Cinerama as "an adventure with a new medium which I believe will revolutionize the technique of motion picture story telling. From the beginning, pictures have been restricted by space A painting is hemmed in by its frame, so to speak Conventional motion pictures are confined to a narrow screen You see only what is straight ahead, while normal vision includes what you see out of the corners of the eyes Someone has said that movies are like looking through a keyhole Cinerama breaks out of the sides of the ordinary screen, and presents nearly the scope of normal vision and hearing."

Cinerama is the result of a brilliant idea, 15 years of untiring research and the expenditure of millions of dollars. Its inventor, Fred Waller, developed the now famous gunnery trainer used by the armed forces in World War II It saved an estimated 350,000 casualties. In it, four trainees sat in a large room in front of a huge spherical screen on which five synchronized projectors threw movies of enemy planes that dove on the novice gunners every which way.

In a realistic three-dimension atmosphere, each gunner fired an electronic machine gun at his adversaries. The gun recorded the hits, instead of firing bullets. This Waller trainer was the final step along the road to Cinerama

The theory behind it dates back to Waller's early days when, as head of Paramount Studio's trick film department, he produced everything from realistic model shipwrecks to convertible carriage pumpkins for Cinderella. Waller figured that if he could devise cameras and projectors that would duplicate most of the normal vision as seen by a pair of human eyes, the human brain would do the rest. His first camera was an eleven-lensed monster which produced film for eleven matching projectors to throw on a curved screen. "It was crude," says Waller, "but it gave the audience an experience, and I knew I was on my way."

The illusion of reality created by Cinerama is closely linked to the functions of the retina of the human eye and the drum of the human ear. The film process attains the effects of real life by surrounding the viewer completely with action and sound in an environment. The picture Cinerama produces is almost a complete half-circle, 146 degrees wide and 55 degrees high—pretty close to two human eyes which cover about 180 degrees and 90 degrees. Naturally, no lens known can cover such a field without excessive distortion. Hence, the Cinerama camera has three 27mm lenses—no bigger than the lens of your own eye—set at 48 degrees angle. Each records a third of the picture's total width as seen on the screen, exposing its own strip of 35mm film. The lenses are arranged on a special mount in the camera like a miniature three section picture frame. The one in the center points straight ahead. Those on each side point in, so that the left lens records the right side of the picture and the one on the right takes the left side. A single, rotating shutter, that whirls in front of the lenses at the point where their lines of view cross, makes foolproof simultaneous exposures on each of the films. Diaphragm controls adjust settings on all three lenses simultaneously.

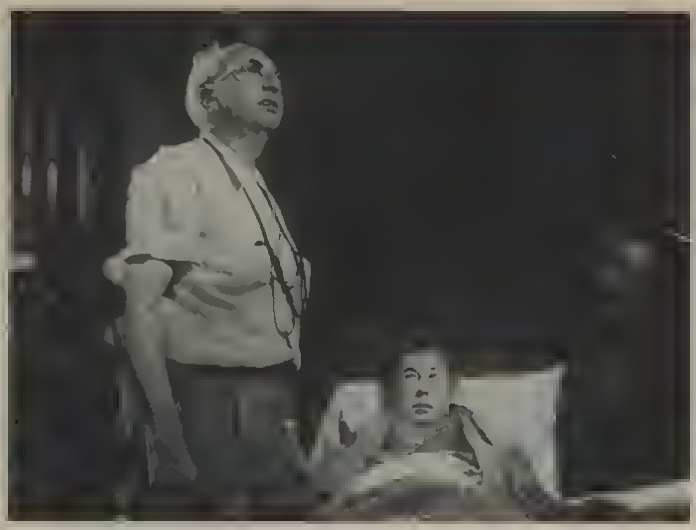
Individual Cinerama film frames are one-half again standard height—in other words, 6 perforations high instead of the standard four—and since three film strips are used, this means that the total amount of film used is 4½ times as much as normally used in filming a standard 35mm feature production. To merge the three film strips into a single picture on the screen, measuring 51 feet in width and 25 feet high, the process is reversed. Three 35mm projectors in separate booths throw the images from each film out onto the screen. The projector on the right fills the left third of the screen; the one on the left, the right third, and the one in the center fills the center portion. Since the screen is curved, one would naturally expect distortion and fuzziness to result; but this does not happen. Great depth of focus of the projector lenses keep the picture sharp. Distortion, caused by reflected light bouncing off the screen, is licked by the screen's special design which is made up of 1100 overlapping vertical strips of perforated tape set at angles like the slats of a vertical Venetian blind, instead of the one-piece screen used in conventional motion pictures. Reflected light bounces off a strip and escapes behind the strip directly in front of it.

One of the problems that had to be overcome in the development of Cinerama was how to put the images of three separate film strips on the screen side by side without lines of demarcation show-

(Continued on Page 498)

HARRY SQUIRE, cameraman, (left) and Bob Bendick (right) co-producer of "This Is Cinerama," which introduces the wonders of the new Cinerama process to the world, pose briefly before photographing a scene with the special 3-lensed Cinerama camera, shown at far left. Note the three film chambers which hold the three separate films used in Cinerama photography, also the gunsight finder at top of camera used in keeping the camera centered on long shot action

FILMING one of the scenes from "Aida" performed by the world renowned LaScalla Opera Company in Milan, Italy, for a sequence in "This Is Cinerama." The three-lensed camera is mounted on the parallel in center foreground. There were not enough studio lights in all Italy to illuminate the huge stage for color film, so additional lights and generators were flown to Italy from England



DIRECTOR OF PHOTOGRAPHY Hal Mohr, ASC, directs the placement of light on Rex Harrison for a scene for "The Four Poster," which Mohr filmed entirely with Garutso balanced lenses

Why I Used The Garutso Lens In Filming "The Four Poster"

Shooting sustained action in lengthy takes required a lens able to keep the major portion of the set in sharp focus at all times without need for excessive illumination.

By HAL MOHR, ASC

THE FOUR POSTER is the second Stanley Kramer production to be photographed with the Garutso balanced lens. With the production staged in a single setting, as in the stage play from which the screenplay was adapted, and using a cast of essentially stage players, it was natural that the picture should be planned, staged and photographed to some extent in the manner of a stage play, utilizing continuous takes of sustained action.

This meant, of course, that the players would require the full scope of the set in which to move about during filming, that often one player would be well toward the front of the set in extreme closeup while the other would be fully up stage. Shooting the action in lengthy, continuous takes without the benefit of cuts to closeups, etc., meant that the camera lens used would have to keep the major portion of the set in sharp focus at all times, and that only a highly efficient depth of focus lens could accomplish this and still permit the use of nominal low key lighting. To have followed the conventional method of employing the usual lenses, stopped down to gain depth, would mean building up the illumination level beyond the point where it could any longer be properly controlled, and would therefore not complement the mood of the story.

Deep focus photography permits greater flexibility in the staging of scenes; it not only allows greater freedom of movement to the director and actors, but also affords the director of photography the means of accomplishing daring and exciting pictorial compositions. The deep focus technique, therefore, was ideally suited to the adaptation of "The Four Poster" to the screen.

Here was a picture in which the entire action takes place on a single set, with only two players, both invariably together in every scene. To permit them

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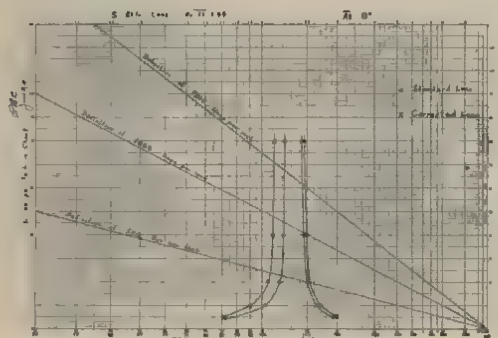
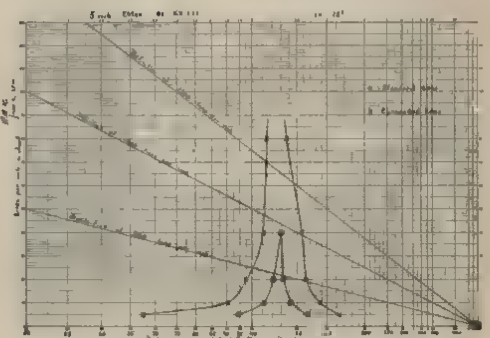
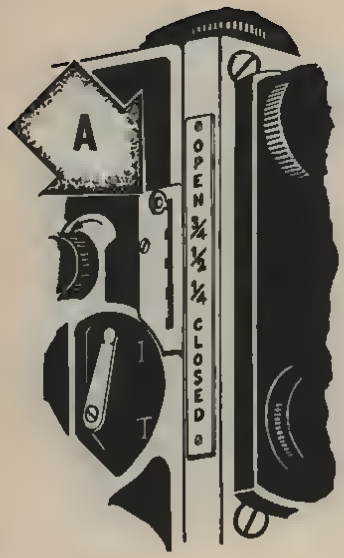


HAL MOHR, who has made numerous experiments with Garutso balanced lenses, says added depth of focus achieved without increasing lighting can effect economies in production by reducing number of camera setups required. Above graphs show comparative increase in depth of field achieved



by Garutso lens reconstruction method, applied to 5" Ektar still camera lens, according to Robert B. King, Prof. of Physics, Calif. Institute of Technology. Left chart shows correction at 0°, right chart at 18°. The standard lens graph line is indicated by X, the corrected lens by O.



A ARROW indicates external control by which shutter opening may be adjusted manually from "open" to "closed" and to three intermediate points, also closed gradually during filming to produce fades. Device is a special installation and is not a part of standard Bolex H-16 cameras.

Variable Shutter For The Bolex H-16

Makes possible smooth fades and lap-dissolves, fast-action filming, and gives new scope to a popular camera.

By FREDERICK FOSTER

ONE OF THE IMPORTANT features which every 16mm cinefilmer wants in his camera when he undertakes professional cinematography is a variable shutter. At present, there are but two 16mm cameras in the semi-professional class which have this feature—the Eastman Cine Kodak Special, and the European-made Pathe Model E "Super 16." However, owners of the Bolex H-16 now may have this feature added to their cameras, thanks to the ingenuity of Tullio Pellegrini, of San Francisco, California.

Pellegrini, an avid Bolex owner and enthusiast, considers the H-16 one of the best 16mm cameras available. Thus, when he reached the stage in his filming activities where he required the added advantages which a variable shutter could give, instead of trading his camera for one having this feature, he proceeded to engineer and install one in his Bolex. So successful was this camera modification that other Bolex owners of his acquaintance persuaded him to install variable shutters in their cameras. Pellegrini soon found himself in a profitable sideline business which later developed into a full-time money-maker. Today, thanks to aggressive advertising, Pellegrini is installing variable shutters in Bolex cameras sent him by owners from all over the globe. "Adding a variable shutter to the Bolex H-16," says Pellegrini, "makes Bolex the 'Cadillac' of cameras in the medium-price field."

Here are some of the advantages which his variable shutter gives to Bolex H-16 camera owners: the ability to make fadeins and fadeouts and lap-dissolves, to achieve smooth changes of exposure when panning from light to dark areas in one take, to get sharper action pictures with faster shutter speeds; and eliminating the need for neutral density filters to cut down the light when using fast film out of doors.

All professional 35mm motion picture cameras, such as those used in the studios and for newsreel and some television film production have variable shutters. The general mechanical structure of a typical motion picture camera shutter is a disc—that is, it is a portion of a disc—which rotates behind the lens and before the film in the camera. It is synchronized with the camera movement so that it is closed during the interval that the film is being moved forward one frame and made ready for the next exposure. The next exposure takes place when the shutter continues to revolve, so that its open portion exposes light to the film as it comes through the lens, and for the interval permitted by the size of the "open portion" of the shutter. Normally, most cine cameras have one shutter speed because the shutter is "fixed"—that is, it is not variable; the open segment is always the same so that the interval of exposure is 1/30, 1/27, 1/40, etc., of a second, depending upon the make and model of the camera. Why there should be a difference of shutter speed between different cameras is probably due to the difference in the camera mechanisms and also to the fact the industry never settled upon a standard for all cine cameras.

Variable shutters are essentially of the same type construction except that two disc sections are employed, one stationary and one rotatable on the shutter shaft, so that various degrees of shutter opening can be produced simply by manual adjustment of a lever which extends outside the camera case, and which moves one shutter segment to change the width of the opening. What results is a change in the amount of light reaching the film, or—when the shutter opening is open or closed progressively as the camera exposes the film, a fade is made. By making a fade out, then winding back the film (with lens capped) the exact number of frames occupied by the fadeout, and subsequently (with lens cap removed) starting the camera and gradually opening theshutter, a lap-dissolve is produced.

In making extensive panning shots where the camera lens moves progressively from a light to a dark area in a scene, unless it is possible to open up the shutter as the dark area is entered, the latter will be underexposed and some if not all the important detail will be lost. In such instances, the professional cameraman progressively opens his shutter to admit more light per exposure as the dark area is reached. While the shutter speed has been changed, correct exposure has been attained throughout the entire scene without otherwise affecting the pictorial result.

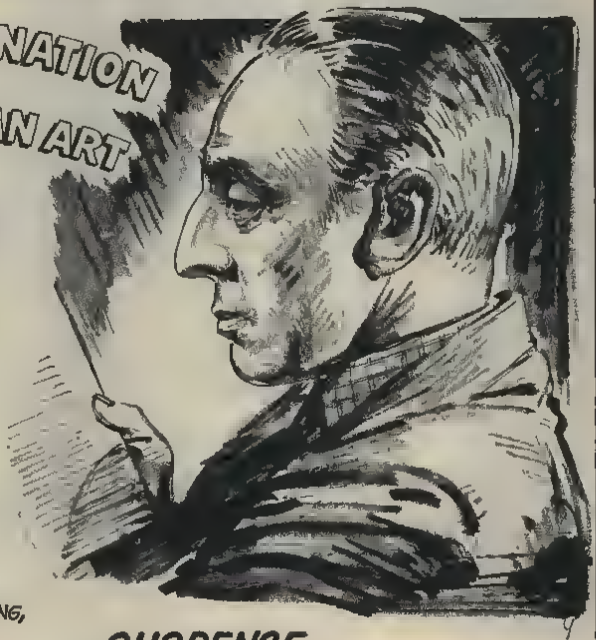
With a variable shutter on a motion picture camera, the photographer has all the flexibility afforded by the still camera with a range of shutter openings. Just as the still photographer will step up his shutter speed to 1/200 or 1/500 second and open up his lens for a fast action shot, the cine photographer having a variable shutter on his camera may do the same. Races and other sports events, flights of birds, and other fast action studies which are thus rendered in sharp detail, become pictorial delights.

Pellegrini's variable shutter installation involves a total of thirty-five parts. Five of these are gears used to form the differential block which, with the aid

(Continued on Page 504)

SEEING IS BELIEVING!

THE BIRTH OF A NATION AND THE BIRTH OF AN ART



IN 1915
MOTION PICTURES GRADUATED FROM FASCINATING NOVELTY TO INTERNATIONALLY RECOGNIZED ART-FORM WITH RELEASE OF D.W. GRIFFITH'S
"BIRTH OF A NATION".
BIG BOX OFFICE WAS BORN, TOO.
THE FILM HAS GROSSED OVER
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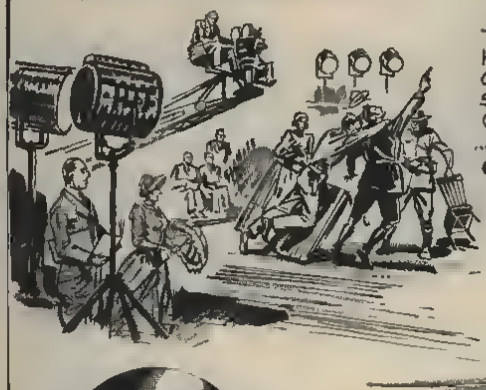

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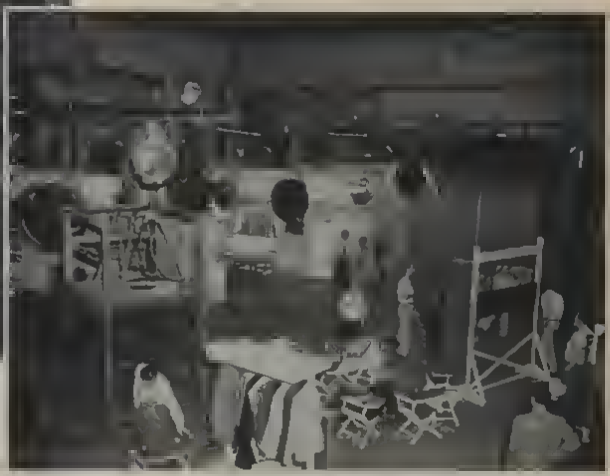
SOME OF THE equipment vital to the photography of the Burns and Allen TV show may be seen in the picture of Gracie Allen discussing a scene with producer-director Ralph Levy (seated) and cinematographer Philip Tannura, ASC. In background are two of the important set lighting units used—the cone-light (right) and the strip-light, which are used with diffusers. Mounted on floor of the camera dollies are two photospot lamps which supply fill light.



GENERAL VIEW of the multiple sets used in staging action for the weekly Burns and Allen TV shows. Note cone lights suspended from ceiling. These are augmented by other lighting units—all suspended from overhead, thus leaving stage clear of cables for free movement of dolly-mounted cameras.

Carefully Balanced Lighting Vital To Best TV Film Results

Optical and mechanical losses introduced in present TV systems, which affect quality of the finally transmitted film image, can be offset by more care in set illumination.

By PHILIP TANNURA, ASC

Director of Photography, "The Burns and Allen Show"

HAVING PHOTOGRAPHED more than a hundred films for television, I feel that I can state with some authority that there is a very real difference between the lighting required for television films and that demanded for theatrical films. This matter of lighting for TV films is an oft-disputed question; but the fact remains that today we still see both good and bad photography on television screens.

The cinematographer who accepts an assignment to photograph a dramatic film for television, should first understand some of the limitations that the electronics of television place upon motion pictures made for the medium. Having done so, he will then set about adjusting his lighting technique to fit the new medium in which he has undertaken to work.

The television film chain consists primarily of a projector and a pickup tube, and associated monitoring equipment. These units introduce optical and mechanical losses into the quality of the finally transmitted film image. The most important element in this chain from the standpoint of quality loss is undoubtedly the pickup tube and its operation. This tube—the iconoscope—which is an energy storage device and therefore subject to many errors common to all such devices, has been subject to much discussion and much improvement during the past two or three years. It has been felt by the most competent engineers that all is not yet fully understood about the use of the iconoscope tube, and new methods of using it are being developed even now.

As an example of one of the difficulties inherent in this type of image pickup device on which we presently rely to transmit film images to home TV screens, the spectral sensitivity of the iconoscope tube extends well into the infrared region of the spectrum. The large amount of infrared radiation present in the ordinary incandescent lamp, which is the light source employed in TV film projectors, falls on the sensitive surface of the iconoscope tube

and creates an unwanted invisible image which in turn gives spurious electronic signals to the monitor circuit.

Since the electrons liberated from the sensitive phosphorous surface in the iconoscope by the infrared radiation passing through the film and falling on this sensitive surface are of low energy content, they tend to form a much less sharp and less well defined image than would be the case if the iconoscope surface were sensitive to visible radiation alone.

Some television stations have sought to counteract this by placing infrared absorbing filters in the projector light beam, and many report marked improvement in the quality of film transmission as a result.

Competent authorities feel that when other methods of projecting TV films are developed and employed by the television industry, it will be possible to obtain at least as good quality from 35mm films as is obtained from direct live pickup. In fact, the theorists go so far as to say that the film pickup program should then be better in quality than live shows, providing the latter are still handled in the same manner as at present.

Much development work is being done at the present time on continuous film projectors, which will be used to project the TV film image into a pickup device known as a flying spot scanner. The combination of the continuous projector and the flying spot scanner, which is not an energy storage device and is therefore not fraught with all the difficulties of such devices, will do much to relieve this problem.

With these facts before us, it is obvious that too often the TV film cameraman is fighting the iconoscope tube. Instead of changing the lighting to fit the tube presently in use in most stations, we find many cameramen following the old studio technique of providing heavy shadows with contrasting large white areas. In photographing the Burns and Allen Show, we aim to make it look like a live show as much as possible. I'm frequently tempted to fall back on studio technique and put heavy shadows into different parts of the set, but I know what will happen when one of the three cameras we use shoots a closeup of a player in one of these shadows. The result may appear passable when screened in the projection room, but it's a different story when it is put through the electronic system and sent out over the airwaves. Then the infrared bugaboo injects itself to seriously alter the character of what was believed a perfectly lighted scene.

It has been my experience that if a player is in front of a "shadow break"

(Continued on Page 501)

Television Film Production

By LEIGH ALLEN

OCTOBER TV FILM PRODUCTION: The following cinematographers were engaged in Hollywood last month directing the photography of films for television:

Gert Anderson, series of half-hour "Ford Theatre" dramas for Screen Gems, at Columbia Studios.

Lucien Andriot, ASC, series of ½-hour "Rebound" dramas for Bing Crosby Enterprises at Hal Roach Studio.

William Bradford, ASC, series of ½-hour Gene Autry films for Flying A Productions.

Norbert Brodine, ASC series of "Racket Squad" ½-hour mystery films for Showcase Productions. (Roach)

Ellis Carter, ASC, "Mr. and Mrs. North" series of ½-hour comedies for Federal Telefilm, Inc. (Goldwyn)

Dan Clark, ASC, "Roston Blackie" series of ½-hour adventure films for Ziv TV Productions.

Ed Colman, "Dragnet" series of ½-hour mystery films for Mark VII Productions. (Walt Disney)

Robert DeGrasse, ASC, "Amos 'n Andy" show for Hal Roach Productions, Hal Roach Studio.

George Diskant, ASC, "My Hero" series of comedy dramas for Don Sharpe Enterprises. (RKO-Pathe).

Cert Fetters, "Favorite Story" series of ½-hour telepix for Ziv TV Prod.

Elly Fredericka, "Riff Baker, USA," "Chevron Theatre," and "Gruen Theatre" series of ½-hour films for Revue Productions (Republic)

Karl Freund, ASC, "I Love Lucy" and "Our Miss Brooks," ½-hour comedies for Desilu Productions (Gen Serv.)

Frederick Gately, ASC, "Linkletter And The Kids," series of 15-min telefilms for John Guedel Prods.; also the "Ozzie and Harriett" comedy series for Volcano Productions Inc (General Serv.)

Alfred Gilks, ASC, "I Married Joan" series of ½-hour comedy films for Joan Davis Prods. (General Service).

Jack Greenhalgh, ASC, "This Is The Life," series of ½ hour religious dramas for Family Films Television, Inc.

Russell Harlan, ASC, "Schlitz Playhouse of Stars" series of ½-hour dramas for Meridian Pictures, Inc. (Goldwyn).

Fred Jackman, Jr., ASC, "The Red Skelton Show," ½-hour comedy series for Key Productions. (Eagle Lion).

Benjamin Kline, ASC, "Fireside Theatre" series for Frank Wisbar Productions. (Eagle Lion).

Kenneth Peach, ASC, "Family Theatre" series of ½-hour dramas for Jerry Fairbanks Porductions. (Fairbanks)

Robert Pittack, ASC, "Lone Ranger" series of ½-hour westerns for Jack Chertok Productions. (General Service)

Clark Ramsey, "Adventures of Kit Carson" series of ½-hour westerns for Revue Productions. (Republic).

William Sickner, ASC, "File of Jeffery Jones" series of ½-hour mystery telefilms for Lindsley Parsons Productions.

William Snyder, ASC, "Terry and The Pirates" ½-hour films for Dougfair Corp. (RKO-Pathe)

Harold Stine, "Big Town" series of ½-hour mystery dramas for Gross Krasne Inc. (General Service).

Walter Strenge, ASC, "Trouble With Father" series of comedy dramas for Roland Reed Prod. (Hal Roach)

Phil Tannura, ASC, "Burns and Allen Show" for McCadden Corp. (Gen Serv).

Tom Tutwiler, ASC, special aerial sequences for "Terry And The Pirates" series of ½-hour dramas for Dougfair Corp. (RKO-Pathe)

James Van Trees, ASC, Groucho Marx "You Bet Your Life" show for Filmcraft Productions, NBC Studio.

Gil Warrenton, ASC, pilot religious TV film for Scripture Films (KTTV).

Fred West, pilot religious TV film for Cathedral Films. (Chaplin Studio)

•

When TV film production began its inauspicious struggle a couple of years ago, it was freely predicted that when the industry really got rolling, it would seek out seasoned studio cinematographers to shoot its video films.

This prediction has been fulfilled. Today, there are no less than 22 ASC members regularly engaged in photographing the important TV film shows in production in Hollywood.

•

Another 13 telefilms in the "Ramar Of The Jungle" series will go before the cameras November 28th, according to Arrow Productions. Clark Ramsey is scheduled to direct the photography.

•

Universal-International and Columbia have become the first major studios to clear the way for unhampered production of telefilms on their lots with the signing last month of agreements with Screen Actors Guild.

FIG. 1 — Sections of three scenes, each made with a different 16mm camera, spliced together to show comparative frame line positions. Center scene is in perfect alignment, while scenes at top and bottom clearly show result of poor alignment of camera aperture plate

Is Your Frame Line Showing?

A faulty camera aperture plate can cause plenty trouble when screening movies made with more than one cine camera.

By LEO J. HEFFERNAN
Photos by the Author

A SERIOUS PROBLEM which amateurs often encounter, when undertaking a group film production in which two or more cameras are used, is the constantly changing frame line that appears on the screen as a result of the intercutting of footage contributed by the different cameras.

Most of us at one time or another have witnessed the screening of pictures where the projectionist is kept busy reframing the film each time it appears out of line—with consequent annoyance to the audience.

Why different cameras should produce pictures with different frame lines is a matter that has puzzled cine cameraists for years. Theoretically, they should all be the same—at least camera manufacturers aim to follow certain standards that have been established by the industry and which specify that the frame lines produced by 16mm cameras should intersect the sprocket holes exactly in the center—as shown in the middle film clip in Fig. 1 and again in the projected result, shown in Fig. 2.

A cine camera which produces pictures with the frame line above or below this position, as illustrated in Figs. 1, 3, and 4, do so for two reasons: 1) the aperture plate in the camera was not correctly set when the camera was assembled at the factory, or 2) it has slipped out of position during use. In either case, it requires the skilled attention of the factory or of an authorized factory service man. Skilled camera technicians in various motion picture centers, such as Hollywood, Chicago and New York also can render dependable service. The camera owner should never attempt the adjustment himself.

If, after acquiring a new or second-hand cine camera, the reader wishes to check it for aperture accuracy before starting to shoot, he may do so quite easily. Obtain a short length of processed film which shows the frame lines clearly and in correct position and thread it in the camera. Remove the lens, and run the camera down until the shutter is wide open. With the pull-down claw at the very bottom of its downward stroke, compare the frame lines on the test film with the top and bottom margins of the camera aperture plate. If no frame line shows, the aperture is correctly aligned. If a frame line shows in the aperture, the plate needs to be re-set to its correct position. Eastman Kodak Company, incidentally, offers a special test film for this purpose, which may be obtained on special order from Kodak dealers or direct from Eastman Kodak Company in Rochester, New York.

If you are a "two camera" cine amateur, you probably need to give some attention to this frame line problem, because if your second camera produces a different frame line result than that of your first, your movies made with the two cameras, when spliced together, will give you a bad time during projection. Certainly there is nothing more annoying than having to sit right

(Continued on Page 495)

FIG. 2 — Correctly aligned scene reproduces perfectly on the screen

FIG. 3 — Poorly aligned scene in Fig. 1 reproduces on screen in above manner

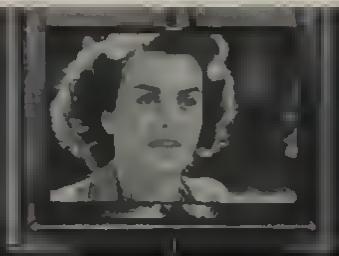
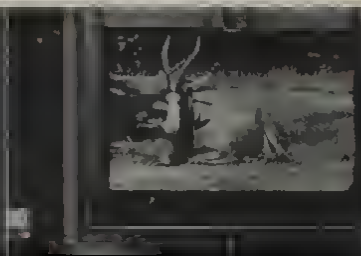


FIG. 4 — The very poorly framed scene in Fig. 1 produces a screen image like this



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SYNCHRONIZING sound track with picture was accomplished in a professional manner by using clap-stick slate on every scene. Holding clap-stick is author Pfening as camera prepares to shoot scene for his 16mm production.

FRED PFENING, JR., (left) used an Auricon 16mm sound camera to shoot most of the scenes for "It All Depends On You." James Franck assisted as sound man.

Amateur's 16mm Film Promotes Annual Community Chest Drive

Chance to aid fund-raising gave this filmer opportunity to undertake his first 16mm sound production. Resourcefulness and careful planning made it a success.

By FRED D PFENING, JR.

LIKE MANY OTHER AMATEUR MOVIE FANS who have long since tired of filming commonplace family subjects, I had given a lot of thought to shooting a "big" 16mm production. Perhaps that is the reason I said "yes" without a second thought, when asked if I would produce a 14½ minute sound film for the United Appeals annual Fall drive in Columbus, Ohio.

In looking back to that fateful phone call, I think it would have been well to have asked a few questions before so readily accepting. At that time I didn't know that nine release prints of the film would have to be ready for showing in six weeks. Also, I didn't know that certain sequences would have to be done in sync sound. But even after being fully briefed by the campaign committee on what they had in mind, it still seemed like an interesting challenge. It was a real opportunity to put into use all the "professional" methods I had read about in American Cinematographer. Having moved into the sound class about a year and a half earlier, I now had a moderate amount of sound-on-film recording experience.

The first step was to work out a general outline of just what we wanted to accomplish with the film. Briefly, the film was to be shown on all three Columbus television stations a number of times, and was also to be used through the local Speakers' Bureau for showing to service clubs and employee groups. We decided to follow pretty closely the established technique used in professional TV films—a minimum of long shots and lots of medium and close shots.

Working from the outline we prepared a full shooting script. The story theme called for using a typical United Appeals (Community Chest, Red Cross, Etc.) solicitor. Jim Thomas attends an

(Continued on Page 492)

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AMATEUR'S 16mm FILM

(Continued from Page 490)

United Appeals meeting because the boss requests him to be there. He doesn't want to have anything to do with the campaign, either as a donor or a solicitor So the boss tells him to take the day off and visit some of the agencies for a first hand view, He does this and is converted. He returns and offers his services to the boss and goes to work on his fellow employees.

Gene Paul, who was cast as Jim Thomas, is an active little theater player and also is assistant factory superintendent for The Fred D Pfening Co Other theater group people also were used in the cast.

An attempt was made to secure outside help in shooting some of the less important shots, but because of the close deadline, I was unable to enlist any aid other than was used in the lip-sync sound sequences. So it wound up as almost a one man job, similar to John Cowart's efforts in Atlanta last year, (It was necessary to take a two weeks "vacation" to do most of the shooting.) This was not too much of a problem. In fact it may have been a lucky happening as it allowed us to move fast, and to have only one train of thought in planning the production as well as the camera angles.

The shooting script, as well as the final script, was written by Wilbur Dennune, executive director of the United Appeals of Franklin Country. His assistant, John Pipic, made all location arrangements and accompanied me on location shooting.

We decided to use the negative-positive system, rather than reversal and a dupe negative Our original thinking was to use single-system sound on the lip-sync portions and dupe the sound on one film and the picture on the other Two reasons lead to the decision to use the double system First, double system editing was involved either way, so there was no relief there; and secondly, it was felt that the overall picture quality would suffer if some dupe picture negative was intercut with original camera negative. For this reason, Eastman Background-X negative stock was used exclusively in the film A local TV station which has facilities for negative-positive developing, did this work for us in record time delivering answer prints in two or three days

Since we had no control over when appointments could be set up at the different agencies that were to be portrayed in the film, the sequences were not shot in order Using a slate at the beginning of each scene solved the problem of editing. Although we estimated that only 522 feet would be required for the picture, we planned on shooting a little over twice that amount We wound up exposing nearly three times the footage needed, which proved to be of great help later in the final editing.

The basic lighting for interiors consisted of spot-type photoflood lamps In most instances we used three to five from front and side, and one or two as backlights Since most shots were held at around fifteen feet the problem of background lighting was not too great On our first day's shooting, we learned to have plenty of fuses handy. Also, the wiring in some of the community centers and sheltered work shops, being very old, presented some lighting limitations

Filters and reflectors were used on all outdoor shots. The exposure was held to f4.5 during most of the indoor location shooting A 13mm f1.4 lens was used most of the time with a 25mm being used for all closeups A 50mm and a 63mm were used sparingly Using this range of lenses, the Bolex H16 proved a highly efficient and flexible camera because of its handy turret which allows quick change of lenses from viewing to taking position

All of the location scenes were filmed in ten days. Since all dialog scenes centered around Jim his boss, and fellow employees, the plant of The Fred D Pfening Co was used for staging these Here, scenes were made in the office, the drafting room, and the sheet-metal layout department Studio type spot and flood lights were added to our photoflood lighting equipment, thanks to the additional electric power that was available

The Auricon double-system sound recording equipment worked very smoothly An average of three takes were necessary on each scene, and, of course, each scene involved a new camera angle In changing camera angles, as when moving from a medium to a close shot we made a point of always moving from a front to a side shot or vice versa We had come to know from experience that it is difficult in editing to cut close and medium shots filmed from the same angle.

Two synchronous Auricon-Pro 16mm cameras were used for the lip-sync shooting—one as a sound recorder and the other for picture The poor acoustics of the relatively bare factory rooms was overcome by hanging heavy blankets around the immediate area where shooting and recording was done. This combined with the use of special sound film stock, enabled us to achieve remarkable sound quality. In fact, the sound quality was so good it would not have been necessary to re-record if it

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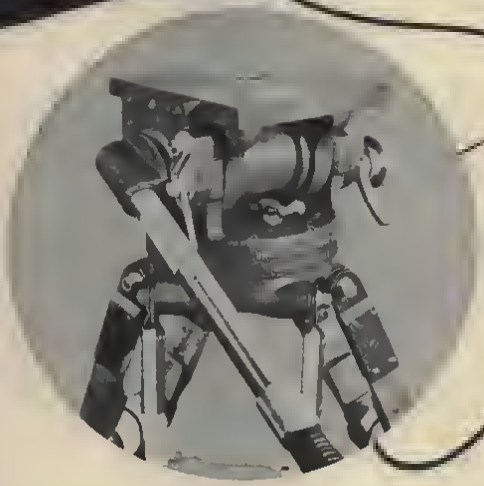

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had not been for the fact we felt that the bi-laterial Auricon track should not be intercut with the unilaterral Maurer track used for the narration

The two Auricon cameras were interlocked by connecting to a single switch in order that they might both come up to speed before the clap stick was used.

During the filming of the sound sequences, I was aided by an assistant cameraman and a sound man The Bolex was used as a second camera to record reaction shots when filming the sound sequences We used the reaction shots to break up the lengthy scenes in which the boss tells his employees about the United Appeals drive Extra footage made of his audience came in handy during editing to cover instances of out of sync sound that developed from switching camera angles.

A Cine Special camera was used for making titles, because of its dissolving shutter, which enabled us to introduce fades and dissolves in the titles as we photographed them The skyline of downtown Columbus was double exposed as a background for the titles

When all of our footage was put together in the first rough cut, we discovered the workprint was over 1600 feet in length. Cutting this down to the 522 feet we had set as the limit proved to be the biggest job of all.

Editing the double system sound turned into a very interesting experience The clap stick sync marks on the sound film are easy to read, and the scene can be put in order with little trouble A two gang synchronizer was used to hold sound and picture together It was also used as a film measuring

machine for timing our footage.

Since time as well as cost was a factor, it was decided that no optical effects would be used In the final cut the fades and dissolves have not been missed and the continuity held up well to the end The final cutting reduced the total number of scenes to 18 After the work print was cut, the narration script was wirtten All scenes were timed and cued for the narration The work print was projected at a sound recording studio where the post recording was done The lip sync scenes were then cut into the narration track This was then printed with the edited picture negative to produce the release prints

All of this amounted to quite an extensive job A rough breakdown on the time consumed shows that shooting required 60 hours. editing work print 25 hours, and recording the narration about 4 hours Because of the tight time schedule it was necessary to have the film lab take over the job of matching the original negative to the edited work print

Thus. six weeks after the first scene went before the camera, our film, "It All Depends On You," was finished When the fund drive began, a total of fourteen prints instead of the 9 originally planned were in circulation Prints were screened as often as 19 times daily during the drive In addition, three Columbus, Ohio, TV stations televised the film a total of ten times

Needless to say, producing the picture proved to be a great deal more work than I realized the day I naively agreed to undertake the assignment. But it also proved a wonderful education to me as well as demonstrating what a serious amateur can do in the way of making films above the amateur level, once he puts his mind to it

FRAME LINE SHOWING?

(Continued from Page 488)

by the machine as you screen a show, repeatedly working the framing lever in an effort to conceal the frame line error in your movies.

Frame line irregularities show up most often in films produced by amateur cine club groups in which several members contribute footage. It's happened to me and my club associates. Today we test and make sure all cameras render uniform frame lines before they are permitted to take part in a joint production.

Nor is this frame line bugaboo confined entirely to amateurs I've seen the fault many times in professional and semi-professional 16mm films. Indeed, film libraries today still have many reels which show this glaring fault

Remember this, if your camera shows evidence of faulty alignment of the aperture plate: almost all 8mm and 16mm cameras made today permit adjustment of the aperture plate. If faulty alignment shows up in a new camera prior to expiration of the camera service guarantee, you can return it to the dealer or to the factory for adjustment without charge. In any event, do not attempt the adjustment yourself. If you need quick service and can't tie up your camera long enough to have the factory adjust it, consult the classified pages of your telephone directory for a reputable camera repair service or ask your camera dealer. The adjustment is easily made, and for a nominal charge. The result will be neat and professional-like presentation of your movies on the screen.

THE STEEL TRAP

(Continued from Page 478)

One example of how the battery power source was used to advantage was when making the running shots of the taxi, shooting from inside the car with the players in the back seat. Two taxis were securely tied together in tandem, as shown in one of the accompanying photos. The players, Laszlo, the director, camera, and camera crew were crowded into the second taxi; the sound recording equipment and power supply batteries were in the first taxi along with the driver, a gaffer, and sound recording engineer. Thus, the two-taxi unit operated independently of outside power sources as it roamed downtown Los Angeles streets, recording action with genuine backgrounds that ordinarily would have been produced (at undoubtedly greater cost) on the sound stage using background plates. Such shots were made both day and night.

"My chief photographic problem in making these scenes," said director of photography Laszlo, "was to balance my lighting inside the taxi to match the daylight coming through the taxi windows. For this, and for numerous other shots of similar nature, I utilized panels of tinted plexiglass having about 50% light transmission, placing them over the windows to cut down intensity of the daylight."

Similarly, when making shots of the plane interior in the daytime, the windows also were covered with plexiglass.

The downtown Los Angeles bank, which provided the interior settings for much of the action of the picture, probably posed the major lighting problems for Laszlo and his crew. Working entirely with Colortrans and a few Jumors, excellent results were had in filming the office scenes and scenes in the giant

vault In shooting scenes in the vast cavernous interior of the bank's main floor, Laszlo had the advantage of some daylight coming through the windows; but when the story called for scenes where windows backgrounded the action, it was necessary to resort to use of the light-reducing plexiglasss panels over the windows

It is natural to conclude that latensification of the film was employed in order to obtain satisfactory photographic results. This was not the case, however Using the limited lighting equipment previously mentioned and a set of choice lenses and fast panchromatic film, Laszlo achieved a realistic documentary type of photography that could hardly have been duplicated, shooting the same scenes staged in the studio

The bank scenes were photographed each day after the offices closed at 3 p m. and up until midnight The company worked the following Sunday all day. which enabled it to shoot scenes in the open offices. the teller's windows, etc, unhampered by people who would normally gather to watch a movie company shooting pictures. Despite the limitations of the lighting, Laszlo worked more or less consistently at a stop of f/2 8 Where he had the advantage of daylight coming through the windows in interiors the lens was stopped down to f/3 5

If the reader has assumed until now that the term "documentary," applied to Laszlo's photography of "The Steel Trap," implies a quality less than that normally obtained in working on studio sets, let it be said that true documentary photography has a more realistic, natural quality, shorn of all the frills so often applied to lighting studio sets It's a little more difficult shooting the "documentary" way A cameraman must not only be unusually resourceful but have a genius for utilizing all the available light at his disposal

Pointing up this quality in Laszlo's photographic technique is the sequence of shots he made inside Antoine's famed restaurant in New Orleans The shots of the couple on the crowded dance floor are an exceptionally good example of genuine documentary photography accomplished with the aid of Colortrans, a single Junior for a key light, and the house current for power

One of the more vexing problems for the company was the fact it had to travel light and therefore work without the advantage of a blimp on the camera. Whenever this seriously affected sound recording, camera "blankets" were used. When shooting within the limited confines of the TWA plane interior, it became necessary to put two blankets on the camera.

Only one camera, a Mitchell, was used

in the entire production and in no instance was a camera dolly used All shooting was done from a tripod Nor were there eny process or speciel effects used. Effects normally done in this manner were incorporated in the original filming as, for example, the plane and taxi interiors in which the backgrounds, seen through the windows, are the real thing.

This is not the first experience for Laszlo in applying documentary photography to feature productions, although it is the first instance in which he or anyone else has applied it to such an extent. It was Laszlo's flair for documentary photography that marked the pictorial success of "D.O A" and "The Well," and which added luster to "The Star"—Bette Davis starrer soon to be released.

While it may be true that pictures such as "The Steel Trap" are made to order for documentary camera treatment, it is quite unlikely that a cameraman having little or no experience in this type of treatment could achieve the dramatic photographic quality that marks "The Steel Trap." There's ample evidence as the picture unfolds on the screen that more than ordinary brainwork went into the planning of the photography of this picture For those who'd like to study the camera work closely, we recommend a second look at the picture; you'll be too busy holding on to your seat the first time you see this thriller to think of the photography.

CINERAMA

(Continued from Page 481)

ing between them. This problem was solved by what technicians call "gigolos" —tiny gadgets that look like combs having teeth along one edge These are fitted on each projector on the side of the film track and jiggle up and down along the edges of the picture area of the film at high speed. These little sawtoothed "dodgers" diffuse the edges of the three Cinerama film images where they join on the screen, blending them together at the margins without a conspicuous dividing line Incidentally the oversized reels which feed film to each of the three Cinerama projectors hold 7,500 feet of film, which runs up to 50 minutes on the screen

The stereophonic sound that heightens the realistic illusion of Cinerama is as new and unusual as the visual effect When a Cinerama production is being photographed, five microphones are placed to pick up the sound in different areas of the scene. One to three others

are placed well off to one side, or behind the camera, to pick up the sound of peoples voices, roaring engines, or whatever may be approaching or leaving the scene Each microphone leads to a recording head on the master multiple magnetic film recorder set up usually near the camera This sound is reproduced in the theatre through five speakers arranged behind the screen—one for each of the sound tracks recorded from the set. Other speakers are placed on the walls of the theatre and another at the rear Each speaker thus reproduces the sounds picked up by the individual mikes at a point corresponding to its position during filming, and thus produces the unusual effect of realistic sound which is an important feature of Cinerama When a motorboat, for instance, roars across the screen, the noise of its engine begins as the boat emerges on the screen from one side, and continues coming from the position of the boat as it travels to the other side

Title of the initial public presentation of Cinerama is "This Is Cinerama." Filmed in Technicolor, it comprises a number of non-related subjects—a sort of melange of short subjects each complete in itself—and include, The Roller Coaster, A Ballet, The Fourth Wonder of the World, Handel's 'The Messiah,' Venetian Boatmen, Kilts and Tartans, Toreador, Spanish Rhythm, The Vienna Boys Choir, The Finale from Act II of 'Aida,' Rare Beauty and Fast Action, and America The Beautiful

Harry Squire is Cinerama's cameraman. There will be others, of course, as Cinerama develops and expands; but Squire is the man who worked as avidly as did Fred Waller to make Cinerama a pictorial success The photography of "This Is Cinerama" is a story in itself, one we hope Harry Squire will write for an early issue of American Cinematographer He isn't what you'd call quiet and retiring, yet today, after the tremendous work and the multitude of experiences he has encountered putting action on Cinerama film, Squire says simply, "It's all routine to me" But the material he photographed for Cinerama's initial public presentation is far from routine stuff, as the reader will see should he be lucky enough to witness a screening of this initial Cinerama production. Squire found there weren't enough lights in Italy to illuminate the stage in filming La Scala Opera Company's brilliant presentation of the "Aida" score in an Italian theatre; additional lights had to be flown in from England, along with extra generators. He mounted his heavy Cinerama camera on the bow of a speedboat to capture thrilling footage of water sports in Florida. To film water-level shots of Cypress Gardens' lovely Aquabelles,

Squire had his crew cut a canoe in half, mounted his Cinerama camera on a platform attached to the open end of the front section. A special camera scaffolding was built in one of the Cypress Gardens lagoons so that the outboard motor boats could come into the scene from beneath the camera. Cinerama photography presented new and interesting problems, none of them difficult—all of them challenging.

Since Cinerama's public debut, there has been tremendous interest generated in this new motion picture innovation. Those who have not yet witnessed it on the screen quite naturally ask about its future, what its effect will be on the motion picture industry, what, if anything, will it do to change motion picture photography in general, and if it can be applied to television.

It is not likely that Cinerama will play a part in television films for sometime to come. Nor is it likely to replace general feature film production. Cinerama is in a class by itself. Its level is in the field of the super-spectacle film production. Its extreme wide angle screen is not ideal for the tight closeups we now see in dramatic films. Cinerama demands stories of great action and pictorial scope. Such pictures as "Quo Vadis," "The Greatest Show on Earth," "Ivanhoe," etc., would have been tremendous Cinerama presentations.

Interest in Cinerama is likely to continue at a high level with industry heads waiting the day it can turn a profit for theatres. James Jerauld, writing in "Boxoffice" for October 11, 1952, said:

"Money—lots of it—is required. A three-camera filming unit, in addition to the regular camera crew in studios, could triple print costs. This wouldn't be an insuperable objection if the public should respond. On the other hand, six projection machines in three booths, six operators on duty in places where two men in a booth are required, and the first cost of installion running up to $75,000 could fill an exhibitor with alarm.

"How to focus attention on one or two or three or four actors in dramatic productions when the screen is the width of the theatre is something else that will require study. When Magnascope was introduced with 'Old Ironsides' about 25 years ago, the screen was suddenly enlarged by pulling back drapes and then closed again with the same speed for the regular lenses. It may be possible to do this with Cinerama.

"Most exhibitors will watch developments with open minds."

The addition of Louis B. Mayer to the Cinerama organization has accelerated interest in the process. It is reported that most of the major Hollywood studios have made inquiries about utilizing it. Since Cinerama, Inc., owns all patents, it would be leased to studios.

Just how Cinerama presentations will be set up throughout the country has not been decided. There have been hints that the company would operate its own theatres. It now has equipment sufficient to operate three. At present, installation cost of equipment for Cinerama showings in theatres costs from $25,000 to $75,000, depending on the theatre. It will be much lower, Cinerama heads say, when mass production of equipment begins. Eventually, the three projector system will be replaced by a single projector, operating much the same as does the single unit, three-lensed Cinerama camera. This, it is said will make the process economically feasible for even small town theatres. END

WHY I USED THE GARUTSO LENS

(Continued from Page 482)

the greatest freedom of movement, it was necessary to keep both players in focus at all times. Having the advantage of maximum depth of focus and using normal set lighting, we achieved a more plastic and natural photographic range. Only in this way were we able to do the unusual lengthy scenes of sustained action and thus permit the players the full scope of their familiar stage technique. One such scene, incidentally, runs approximately seven minutes on the screen; the two players move back and forth on the set in various planes of focus, the camera following them and at all times keeping both players in sharp focus, thereby obviating the necessity of individual closeups.

Most of the scenes were photographed with the Garutso balanced lens set at f/2.8, its maximum stop. In spite of this wide aperture, the desired depth of focus was achieved and at the same time the full quality inherent in the lens at its widest aperture was retained. The depth of focus thus obtained is comparable to that made possible with other lenses working at approximately f/4.5 to f/5.6.

It is recognized by photographers generally that practically all lenses deliver their most pleasing quality when working at their rated (widest) stop, and this is no less true of the Garutso. The reason is obvious. If increased depth of focus is desired, it is obtainable in the conventional lens by stopping down the aperture. The greater the depth of focus desired, the smaller the stop used. As the lens is stopped down, its light transmission is reduced proportionately. This means a tremendous loss of exposure, a loss which can be equalized only by the addition of increased set illumination. Add to this the fact that the above method increases the almost microscopic sharpness and contrast to a degree that is acknowledgedly undesirable in most productions; also, that the lens in question was designed to give peak aesthetic results at its rated aperture.

Why does the Garutso achieve the efficient depth of focus we found so desirable for "The Four Poster"? Perhaps a description of the lens is in order at this point.

In the past many attempts have been made to achieve a satisfactory depth of focus at wide aperture, the most notable of which to my knowledge being the efforts of a Dr. Dietrich, now deceased. His method consisted of a mechanical device by which a standard lens was oscillated between two given points, thereby changing focus of the lens from one plane to another. This method, however, possessed many obvious faults and was soon abandoned.

Later, Steven E. Garutso, an optical researcher, sought the answer to the problem of deep focus along basically revolutionary lines. He succeeded by adding a secondary plane of focus at a predetermined distance from, and in relation to, the established focal plane of the basic lens itself. His method consists of adding to the basic lens an annular optical element that interferes with a portion of the actual lens area itself. This added element is carefully prescribed and ground so that the center portion allows an uninterrupted transmission of the image to be photographed through a sufficient area of the original objective lens. Thus, there is projected on the film an image comparable to that normally produced by the original basic lens. In addition the outer area of the added element creates, through the portion of the original lens obstructed by this area, a second image of a predetermined added plane of focus. This second image is placed in perfect registration over the image projected by the uninterrupted portion of the lens, with the result that the one lens now has become virtually two, each projecting its own image, of a different plane of focus, directly over the other and in perfect relation thereto. The final result is a picture that contains within itself two completely detached planes of focus.

It must be noted here that the two images thus superimposed must of necessity be identical in size and in exact registration, also, as the basic focus

of the lens is altered to meet the requirements of the subjects being reproduced the secondary plane also alters itself in relation to the varied focal lengths of the lens during this period of operation This action is controlled by a basic optical law which makes it mandatory that the depth of focus vary as the focal length of the lens is changed for the purpose of bringing objects at various distances into focus

By way of illustration let us assume that the area of critical focus necessary at a given time is the distance between ten feet and infinity During the course of the action being photographed it becomes necessary to bring the forward plane of focus up to a much closer object that has been introduced into the immediate front of the lens As the focal length of the lens is increased to accommodate this new plane of focus, the area of depth of focus must decrease, by established law, in relation to the increased focal length of the lens In the case of the Garutso method this relation of change in depth of focus maintains, but to a lesser degree, and in proportion to the greater depth of focus This may be observed in a practical way through special study of several scenes in "The Four Poster." most notable of which are the scene with the husband standing before an open window. with his wife in bed some distance behind him, the husband reclining in a semi-closeup tossing beads at the room lights in an effort to extinguish them as his wife pretends slumber in the four poster some distance beyond, the opening shot in the toys sequence, and several others These scenes especially demonstrate how the Garutso balanced lens made it possible. because of the depth of focus achieved at wide aperture, to secure the desired focal range without employing excessive illumination. To have followed the conventional technique of small aperture and an abundance of set illumination would have increased contrast and overall sharpness This would have tended to spoil the poetic quality of the picture and produce photographically a mood not in sympathy with the story, It should also be noted at this time that f employed all of the usual methods of added optical diffusion commonly used to achieve the photographic mood which prevails in "The Four Poster."

Irrespective of some opinions to the contrary. it has been my finding that, aside from the technical advantages afforded by the Garutso lens, which are undeniable, the results to the objective viewer do appear to have an added aesthetic quality This is due, of course, to the general increased usable sharpness of all essential planes. thereby eliminating to a great extent the distortion that is usually present in all out-of-focus areas which. through use of this device, have been substantially reduced

Opinions previously expressed as to the technical advantages of the Garutso lens over standard lenses have been substantiated by no less an authority than Robert B King. Professor of Physics, California Institute of Technology His evaluations, following critical examination of the lens, are set down in the accompanying graphs "The results show," King wrote in his report, "that the Garutso reconstruction substantially increased the depth of field of the lens tested. They also show that the definition was maintained and. at larger angles, considerably improved."

Early in my experiments with the Garutso, I predicted that the proper application of added depth of focus with no attendant increase in lighting would effect an economy of operation by materially reducing the number of required setups ordinarily made necessary because of the focus shortcomings of standard lenses and at the same time permit greater fluidity in performance and direction I think we have achieved all this in "The Four Poster."

BALANCED LIGHTING BEST FOR TV FILMS

(Continued from Page 407)

in a scene, his face is sure to wash out and the dark area will respond in reverse with fringing and a white haze Experience further shows that whenever a bright white area appears in a scene—and this includes white faces in closeup against a dark background—the area will wash out on the TV screen because the ratio between the white and dark areas is too great. A typical example of this occurred early in the Burns and Allen Show series fn both medium shots and closeups of Burns doing monologue between the intervals Gracie is on stage, he was placed standing against a dark column that is part of the stage proscenium The televised results were what one might expect—Burns' features were hardly distinguishable, result of too great contrast between his face and the immediate background To correct this. we lessened the ratio of contrast between the two; put darker makeup on Burns and reduced the density of color of the background, bringing them more into balance, Incidentally. all our players are now using darker makeup than is generally used in films for theatre presentation, with consequent marked improvement in the TV screen quality. Thus we find that one of the most important rules for lighting and

(Continued on Page 503)

Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month

★ ★ ★ ★ ★ ★ ★ ★

Allied Artists

• William Sickner, "Timber Wolf," with Kirby Grant, Chinook, Inga Borg Rex Bailay, director

• Ernest Miller, "Star Of Texas," with Wayne Morris, Lyle Talbot Thomas Carr, director

• Harry C Neumann, "The Roar of the Crowd," (Cinecolor) with Howard Duff, Helene Stanley Wm Beaudine, director

Columbia

• Charles Lawton, "Love Song," (Technicolor) with Jane Wyman, Aldo Ray Alexander Hall, director

• William Bradford, "Pack Train," (Gene Autry Prod.) with Gene Autry, Smiley Burnette George Archainbaud, director

• Henry Fabulich, "Slaves of Babylon," (Esskay Pictures) (Technicolor) with Richard Conte, Linda Christian Wm Castle, director

• Burnett Guffey, "Posse," with Broderick Crawford, John Derek. Alfred Werker, director

Metro-Goldwyn-Mayer

• Frederick A. Young, "Invitation To The Dance," (Technicolor) (Shooting in London) with Gene Kelly, Igor Yousekevitch. Gene Kelly, director

• Harold Lipstein, "Cry Of The Hunted," with Vittorio Gassman, Barry Sullivan, and Polly Bergen Joseph Lewis, director.

• Ray June, "Code Two," with Ralph Meeker, Sally Forrest, Robert Horton, James Craig, Keenan Wynn, Jeff Richards. Fred M. Wilcox, director

• Milton Krasner, "Dream Wife," with Cary Grant, Deborah Kerr, Betta St. John, Buddy Baer, and Richard Anderson Sidney Sheldon, director.

• Paul C Vogel, "The Clown," with Red Skelton, Jane Greer, and Timothy Considine Robert Z. Leonard, director

• Charles Rosher, "Young Bess," (Technicolor) with Jean Simmons, Stewart Granger, Deborrah Kerr, Chas. Laughton George Sidney, director

• Robert Planck, "Remains To Be Seen," with June Allyson, Van Johnson, Louis Calhern Don Weiss, director

• George Folsey, "The Band Wagon," (Technicolor) with Fred Astair, Cyd Charisse. Vincente Minnelli, director

• William Mellor, "Give A Girl A Break," (Technicolor) with Marge and Gower Champion, Debbie Reynolds Stanley Donen, director

• Harold Lipstein, "Fast Company," with Howard Keel, Polly Bergen, Nina Foch, Marjorie Main John Sturges, director

Paramount

• Ernest Laszlo, "Houdini," (Technicolor) with Tony Curtis, Janet Leigh, and Torin Thatcher George Marshall, director

• George Barnes, "Little Boy Lost," with Bing Crosby, Claud Dauphin, Nicole Maurey, Chris Fourcade, George Seaton, director.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only

•

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• Harry Stradling, "Forever Female," with Ginger Rogers, William Holden, Paul Douglas. Irving Rapper, director

• Lionel Lindon, "Here Come The Girls," (Technicolor) with Bob Hope, Tony Martin, Arlene Dahl Claude Binyon, director

R.K.O.

• Nick Musuraca, "Split Second," with Stephen McNally, Jan Sterling, Alexis Smith Dick Powell, director.

20th Century-Fox

• Leon Shamroy, "Call Me Madam," (Technicolor) with Ethel Merman, Donald O'Connor, George Sanders, Vera-Ellen, Helmut Dantine, Ludwig Stoessel, Charles Dingle, Billy DeWolfe, Leon Belasco, and Walter Slezak Walter Lang, director

• Lucien Ballard, "Baptism Of Fire," with Victor Mature, Alvy Moore, Gregg Martell, Lee Marvin, Nick Dennis, Richard Egen Rober B Webb, director

• Leo Tover, "The President's Lady," with Susan Hayward, Charlton Heston, Fay Bainter, Gladys Hurlbut, Charles Dingle, and John McIntyre. Henry Levin, director.

• Joe MacDonald, "Nearer My God To Thee," with Clifton Webb, Barbara Stanwyck, Thelma Ritter Jean Negulesco, director

Universal-International

• Cliff Stine, "Law And Order," (Technicolor) with Ronald Reagan, Alex Nicol, Susan Cabot, Preston Foster, Dorothy Malone, Russell Johnson. Nathan Juran, director.

• William Daniels, "Thunder Bay," (Technicolor) with James Stewart, Joanna Dru, Gilbert Roland, Dan Duryea, Marcia Henderson, Jay C. Flippen. Anthony Mann, director

• Carl Guthrie, "Night Flowers," with Patricia Hardy, Leonard Freeman, Harvey Lembeck, Joyce Holden, Don Gordon Jack Arnold, director

• Maury Gertsman, "Sioux Uprising," (Technicolor) with Jeff Chandler, Faith Domergue. Lloyd Bacon, director

• Russell Metty, "Flame of Timberhoe," (Technicolor) with Ann Sheridan, Sterling Hayden Douglas Sirk, director.

Warner Brothers

• Edwin DuPar, "She's Back On Broadway," (Warner-Color) with Virginia Mayo, Steve Cochran, Gene Nelson, Patricia Wymore. Gordon Douglas, director.

• Carl Guthrie, "The Jazz Singer," (Technicolor) with Danny Thomas, Peggy Lee, Mildred Dunnock, Edward Franz, Allyn Joslyn Michael Curtiz, director

• Wilfrid Cline, "By The Light Of The Silvery Moon," (Technicolor) with Doris Day, Gordon MacRae, Rosemary DeCamp, Leon Ames, Mary Wickes. David Butler, director.

• Robert Burks, "I Confess," with Montgomery Clift, Anne Baxter, Karl Malden, Brian Ahern, Roger Dann. Alfred Hitchcock, director.

• Archie Stout, "Alma Mater," with John Wayne, Donna Reed, and Charles Coburn Michael Curtiz, director

Independent

• John Seitz, "Invaders From Mars," (National Pictures) with Jimmy Hunt Helena Carter, Arthur Franz, Leif Erickson William Cameron Menzies, director

• W Howard Greene, "Swords Before The Mast," (Technicolor) (Edward Small Prod.) with John Payne, Donna Reed, Gerald Mohr, Lon Chaney Sidney Salkow, director

• Joseph Biroc, "The Tall Texan," (T. Frank Woods Prod.) with Lloyd Bridges, Lee Cobb, Marie Windsar Elmo Williams, director.

• James Wong Howe, "Main St. To Broadway," (Cinema Prodns.) with Tallulah Bankhead, Olivia de Haviland, Faye Emerson, H. Fonda, R Harrison, M Martin Tay Garnett, director

• Karl Strauss, "Tarzan And The She Devil," (Sol Lesser Prod.) with Lex Barker, Joyce MacKenzie. Kurt Neumann, director

• John Alton, "The Thirteenth Man," (Ben Bo Prod.) with Teresa Wright, Macdonald Carey Don Siegle, director

BALANCED LIGHTING BEST FOR TV FILMS

(Continued from Page 501)

photographing films for television is to achieve proper light balance between players' faces and the set

I have found that, by painting our sets light green, light tan, deep yellow, etc., and using wallpaper of corresponding hue, we obtain tonal qualities satisfactory to the iconoscope tube.

Just as conventional studio lighting methods must be altered to suit the medium of television, so also is it necesary to change the conventional method of checking and analyzing such films I never screen any of my television films in the projection room. Instead, I see them on a closed television circuit, even though this method will give me a better picture than is normally seen on the home receiver. Here again the vagaries of the electronics system play a huge part in the final screen result.

I think one of the important things the TV film cameraman should always keep in mind is the fact that while we nominally have a printing range of twenty-two lights on our light tests, when television films are projected from the tube. this range is reduced to but two points below and above their projection range

Unfortunately, when good film quality *is* achieved in television films, there are still some factors which tend to degrade their quality by the time they are seen on the home receiver, with consequent criticism for the photographer These include poor sound reproduction, image unsteadiness, and lack of resolution in the image The first two of these may be traced directly to poor projection equipment in the television stations There is little excuse for this condition prevailing today. Witness the quality of the best film programs put on by the major networks It is impossible today to tell 16mm from 35mm prints if both have been made carefully and well by the laboratory technicians, and are being projected on the best available projectors made especially for the purpose.

The third factor. namely the lack of resolution, is most often attributable to poor duplicating techniques in the laboratory. In the handling of reduction prints it is necessary that even greater care be used to retain fine detail than need be used in the making of straight 35mm contact prints, in order that the end results be the same. Before criticizing the laboratory, however, the cameraman first must look to his own techniques; and this brings us back to the basic subject of this treatise—the need for more careful light balance in the photography of films for television.

INDIA FILM TECHNICIANS

(Continued from Page 477)

pictures in India, and emphasized the important part that study of American films played in their technical education.

Producer-director D. Suhramanyam described the difference in the working conditions of an Indian cameraman and the average director of photography in Hollywood In India, the chief cameraman has no "assistant" or "operator" as we know them here, he explained, and said that in most cases the chief cameraman is also his own assistant, camera coolie, etc —carrying his camera from setup to setup. loading the film, and shooting the picture.

Suhramanyam, who is a member of the Cine Technicians' Association of Madras. said he was impressed with the happy spirit of cooperation that exists among members of the ASC. He extended an invitation to the Society to send one of its members to participate in India's Festival of Arts, which is to be held in Bombay sometime in December.

The visitors were especially impressed by the display of motion picture equipment in the lobby of the clubhouse, prior to the dinner. Here they had opportunity to examine first hand the latest model Mitchell 35mm motion picture camera; the new Auricon "Super 1200" 16mm sound-on-film camera; a new compact, light-weight camera dolly, which was demonstrated by its designer Steve Krilanovich, RKO studio sound engineer; the new Kinevox automatic scene slater for Mitchell cameras, which was demonstrated by its designer, Len Roos, ASC; and a revolutionary new 35mm automatic film splicer, introduced by Sidney Solow, ASC, head of Consolidated Film Industries. Later in the evening, Solow described some of the very interesting motion picture developments which he had found in Europe during his recent visit there

Following the dinner, ASC members and their Indian guests were given a screen demonstration of the recently introduced Vistascope process, which involves the use of a special camera device and photo cutouts to produce action scenes without the need for constructing

sets (See American Cinematographer for August, 1952.—ED)

The original demonstration film made by the French inventor, Achilles Pierre DuFour, was screened followed by tests made both in black and white and color by Paramount Studio engineers. The demonstration revealed how the actual "set" appears with the photo cutout or matt removed from the Vistascope.

Dr. Charles Daily, Paramount Studio engineer, described the process step by step during the screening, and answered questions regarding the use of Vistascope in major film production. The Indian technicians were particularly impressed with the possibilities of applying the Vistascope to their country's film making system. According to one of the visitors, the process could aid them greatly in shooting action in distant locales where now they are often hampered by transportation problems.

Each of the Indian technicians has an extensive and interesting career in motion picture production. Cameraman B. P. Divecha has photographed more than fifty Indian feature films during the last two decades. He claims to have learned most of the fine points of his profession by seriously studying the photography of films made in America. As a result, he is familiar with the names and the work of just about every director of photography in the Hollywood studios. He manages to see at least one Indian or foreign-made feature film daily, which probably makes him the leading film reviewer of his country.

Producer-director D. Subramanyam is one of the important figures in the Indian motion picture industry. He sponsored the Madras United Artist Corp., and later the Motion Picture Producers Combine Studios. He is well informed on every phase of the industry throughout the world, and believes the cameramen are of utmost importance to the success of any motion picture. His speech before the ASC members and guests was most impressive.

Art director M. R. Acharekar is the author of a number of books on art and he also founded the Art Academy in Bombay in 1945. Acharekar was commissioned by Lord Wellington, when the later was Viceroy to India, to record Jubilee Celebration of King George V.

Minoo Katrak joined the sound recording department of Famous Cine Laboratory in Bombay in 1948, as recording director. Since then he has specialized in music recording for most of the motion pictures made by Indian independent film producers. As music predominates in most of the Indian pictures, Katrak is one of the industry's busiest men.

Producer-exhibitor B. N. Sircar established New Theatres Ltd. in Calcutta in 1930, and has held important posts in nearly all Indian motion picture trade organizations. He was also a member of the 1949-50 Film Inquiry Committee, appointed by the Government of India.

During the Indians' visit, they were also hosted by each of the major studios of Hollywood in day-long tours of sound stages and at luncheons. Officially welcoming the visitors to Hollywood were Y. Frank Freeman, board chairman of the American Motion Picture Producers Association, and Frank Capra who recently spent eight weeks in India representing the United States at the Indian International Film Festival.

VARIABLE SHUTTER

(Continued from Page 484)

of three swivelling bars and a control handle and other miscellaneous parts, form the unit for advancing or retarding the auxiliary shutter disk.

The accompanying illustration shows modification of exterior of the Bolex H-16 camera with the adjustment lever, indicated by the arrow A, protruding and operating in a slot, and the scale plate which shows the range of shutter opening from closed, to ¼, ½, ¾ and full open.

By proper setting of the lever, the following range of shutter speeds may be obtained:

SHUTTER SETTING	OPEN	¾	½	¼
8 frames per sec	1/18 Sec	1/28	1/35	1/70
16 "	1/35 "	1/53 "	1/70 "	1/140 "
24 "	1/53 "	1/70 "	1/105 "	1/210 "
32 "	1/70 "	1/105 "	1/140 "	1/280 "
64 "	1/140 "	1/210 "	1/280 "	1/560 "

Altering the shutter opening changes the amount of light reaching the film and therefore changes the exposure. In order to obtain the same exposure while increasing the shutter speed, the lens stop is increased. The procedure is reversed when decreasing the shutter speed.

For the benefit of Bolex camera owners who may be interested in the installation of a variable shutter in their cameras, Tullio Pellegrini has prepared a comprehensive booklet explaining his installation and describing in detail how various effects are achieved through its use. Address him at 1545 Lombard Street, San Francisco 23.

Color In Newsreels

The American Newsreel, which is devoted entirely to events of interest to Negroes, will include one sequence in color in its reels starting October 15, according to *Showman's Trade Review*. Eastman negative-positive color film will be used and in the initial presentation will show Colored America at Atlantic City.

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ARTHUR E. GAVIN
Editor

Sworn to and subscribed before me this 27th day of September, 1952

(Seal)

C. K. Buchanan
Notary Public

(My commission expires October 10, 1952.)

WHAT'S NEW

in equipment, accessories, service

TRADE NOTES — Glen Glenn Sound Co., Hollywood is among the nine foreign and domestic companies signing recording licensing agreements with Westrex Corporation . . . **Photo Research Corpn., Burbank,** will supply Consolidated Film Industries with densitometry equipment for CFI's new 16mm film lab . . . **T. J. Hargrave,** chairman of the board of Eastman Kodak Company, Rochester, N. Y., celebrated his 25th anniversary with the company last month. Hargrave is youngest man ever to attain position of board chairman with Kodak . . . **"Swaee Davit,"** Hollywood's first 3-dimension color production, features magnetic sound recorded on Stancil-Hoffman equipment, has been selected by Notre Dame University's Audio Visual Center to process its football films . . . **Kodisch Camera and Sound Equipment Co.** has moved to new quarters at 500 West 52nd Street, New York City . . . **Frank Zucher,** head of Camera Equipment Company, was in Hollywood last month on business. Among the new motion picture equipment which he contracted to distribute in the east is the new Kinevox automatic scene slater, has also set up servicing of the equipment for east coast buyers . . . **Ansco's** Boston District office has moved to new and expanded quarters at 80 Federal Street. Boston L. H. Purcell is district manager . . . **Dr. Martin L. Klein,** former faculty member of Pennsylvania and Stanford Universities, has joined the technical staff of Stancil-Hoffman Corp., Hollywood . . . **Benjamin Berg Agency,** U.S. distributor for Eclair cameras, expects soon to have the new Eclair 35mm studio camera available for delivery from Hollywood. Camera features through-the-lens viewer, same as the Camerette.

Sno-Gel Ice, a gel-like compound produced from a mixture of processed powder and water and encased in a flexible plastic bag, may be frozen solid in an ordinary refrigerator then used to refrigerate a wide range of perishables, including motion picture film. It is finding wide use in the film industry as a refrigerant for films transported in tropical countries. It is said to be simpler to use than dry ice, and is completely free of moisture. When Sno-Gel Ice melts, it remains in its waterproof container, may be quickly re-frozen, used over and over again. Distributor is Sno-Gel, Inc., 10715 East Dames Dr., Temple City, Calif.

Humidifying Equipment — Abbeon Supply Co., 179-15 Jamaica Ave., Jamaica, N. Y., makers of industrial humidifiers, offers free to AC's readers, a comprehensive booklet entitled "A Few Facts About Humidification." Company makes humidifying equipment having many applications in the motion picture industry.

Mitchell Camera Company, 666 West Harvard St., Glendale 4, Calif., announces that recently increased production of its professional 16mm cameras now permits company to make deliveries within a 30-day period. Stepped up production is due to demand for Mitchell "16s" by Government Armed Forces.

Processing Of Foreign Films — Cine cameraists having foreign brands of 8mm and 16mm films requiring processing in this country, may secure this service from General Photographic Supply Co., 136-140 Charles St., Boston 14, Mass. Cost per roll is as follows: Dufaycolor, $1.50; Agfacolor (neg-pos) Ferraniacolor, Fujicolor, Gevacolor, Ilfordcolor, Lumierecolor, Pakocolor, Sakuracolor, Telecolor, etc., $3.50 per roll. Company also offers to supply prints of frame enlargements of such films at moderate cost. Payment in advance must accompany all orders.

TV Film Titles — Ray Mercer & Company, 4241 Normal Ave., Hollywood 29, Calif., has expanded its title department to better serve the increasing demand for titles for television films, a specialty of the company.

REVIEWS

(Continued from Page 470)

Greene, said to be the inventor of the first motion picture camera. Cardiff's real talents come to the fore in his execution of the low key shots of Friese-Green in his film laboratory, and again with his candid camera shots at the carnival preceding the introduction of the first showing of moving pictures there.

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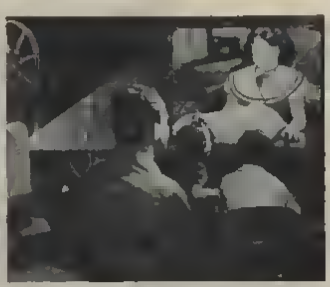

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